EXHIBIT G

ENVIRONMENTAL PERMITTING, INC.

Mr. Edwin Muñiz
Chief, Antilles Regulatory Section
U.S. Army Corps of Engineers
400 Fernández Juncos Avenue
San Juan, Puerto Rico 00901-3299

11 July 2003

Dear Mr. Muñiz:

Reference is made to Department of the Army permit application Number 198800516(IP-VG), submitted on behalf of Villa Marina Yacht Harbor, Inc., to expand an existing marina by 225 additional slips. The proposed marina expansion is specifically located on the eastern end of Villa Marina, at PR-987, km 1.7, Sardinera Ward, Municipality of Fajardo, Puerto Rico.

Based on past comments from the U.S. Army Corps of Engineers (USACE) regarding this project, we are submitting the following new documents:

1. Bathymetric Analysis for Villa Marina, Fajardo, prepared by Dr. Alfredo Torruella, Ph.D., of Caribbean Oceanography Group.

2. Wave Refraction/Diffraction Analysis for Villa Marina Yacht Harbor, Sardinera Bay, Fajardo, prepared by Dr. Alfredo Torruella, Ph.D., of Caribbean Oceanography Group.

3. Hydraulic Stability Analysis for Proposed Breakwater for Villa Marina Yacht Harbor, Fajardo, prepared also by Dr. Alfredo Torruella, Ph.D., of Caribbean Oceanography Group.

Each of these documents clearly explains the engineering science behind the design of the proposed marina, as well as an abstract summarizing each of the findings. In addition, we are also including 8 ½ by 11 inch revised plan view, cross section and longitudinal section of the breakwater that incorporate Dr. Torruella"s recommendations. Also, enclosed please find 8 ½ by 11 inch color photograph of the area where our proposed marina expansion will be constructed, showing the existing marinas, proposed amenities by Villa Marina Yacht Harbor and distances between existing and proposed structures. This should make evaluation of our project still more easier to grasp.

P.O. Box 362893, San Juan, Puerto Rico 00936-2893
Tel.: (787) 790-6707 • Cel.: (787) 396-0640 • Fax: (787) 272-5218

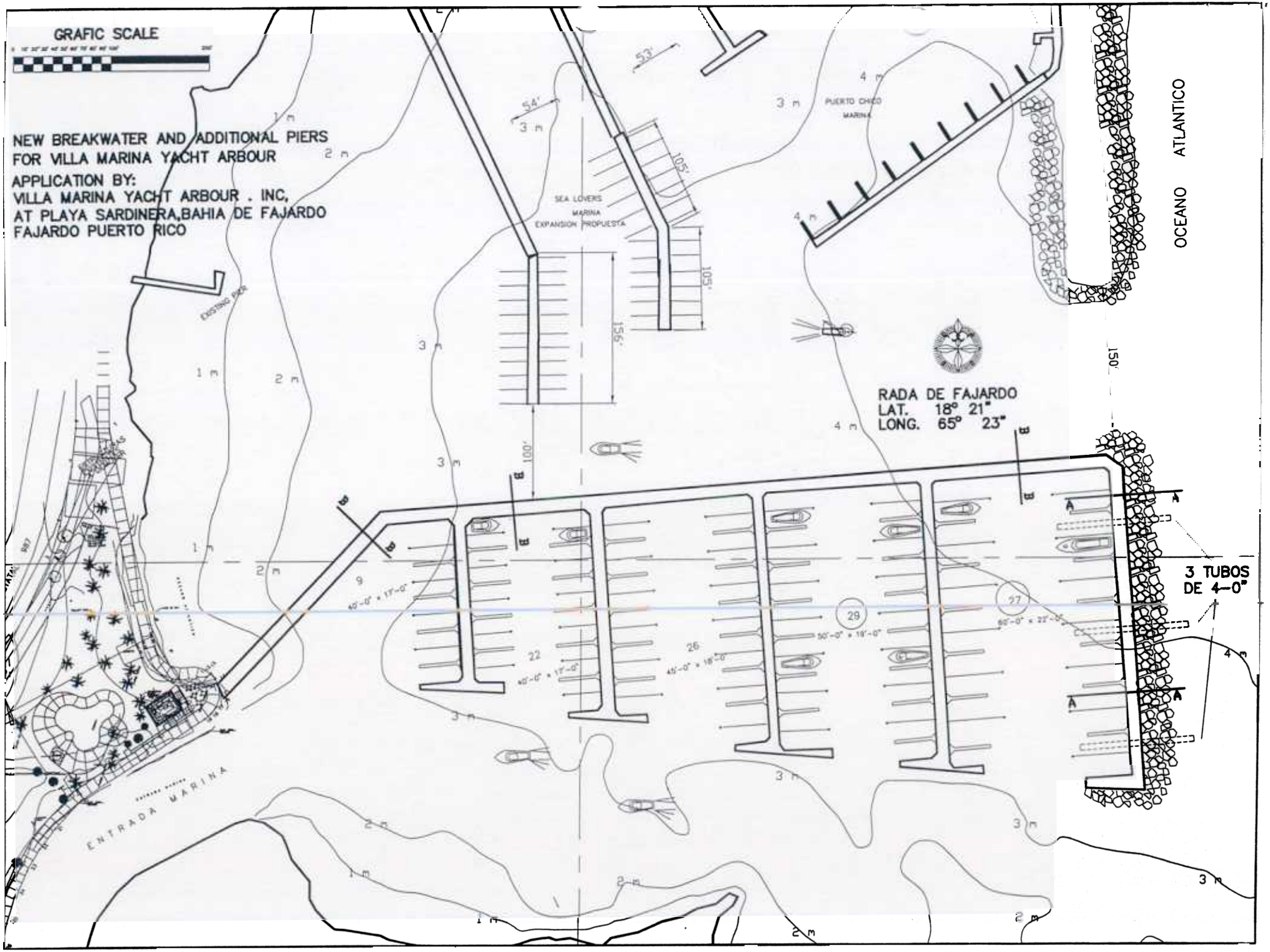
We thank you for your comments and for helping us achieve a more secure design of the Villa Marina expansion. If we may be of further assistance, please contact us at (787) 790-6707 or (787) 396-0640.

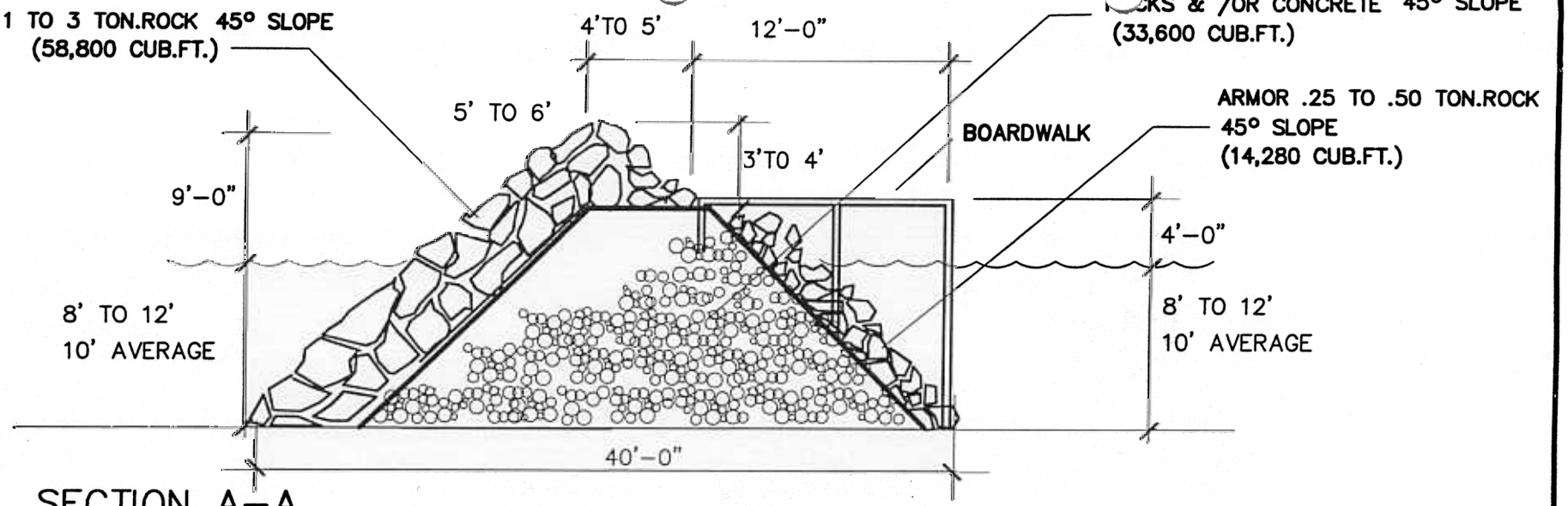
Sincerely,

Gustavo Adolfo Rodríguez
President
ENVIRONMENTAL PERMITTING, Inc.

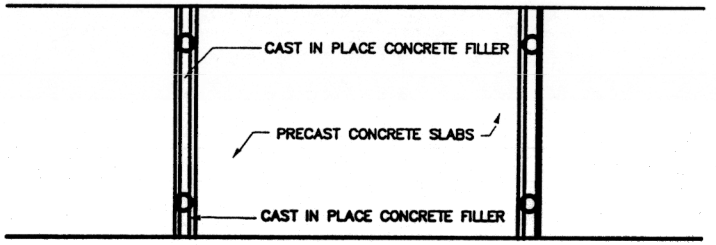
Enclosures

Copy: Mr. Eduardo Ferrer, Villa Marina


GRAFIC SCALE
NEW BREAKWATER AND ADDITIONAL PIERS
FOR VILLA MARINA YACHT ARBOUR
APPLICATION BY:
VILLA MARINA YACHT ARBOUR . INC,
AT PLAYA SARDINERA,BAHIA DE FAJARDO
FAJARDO PUERTO RICO
OCEANO ATLANTICO
PUERTO CHICO MARINA
SEA LOVERS MARINA EXPANSION PROPUESTA
EXISTING PIER
RADA DE FAJARDO
LAT. 18° 21"
LONG. 65° 23"
3 TUBOS DE 4-0"
ENTRADA MARINA
53'
54'
105'
150'
100'



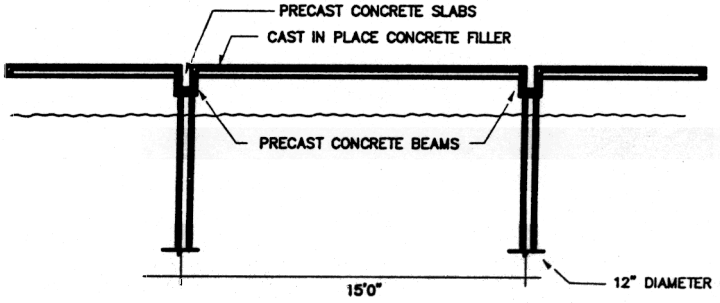
SECTION A–A



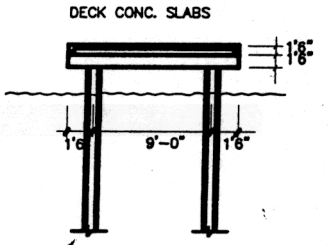
PARTIAL DOCK PLAN

NEW BREAKWATER AND ADDITIONAL PIERS
FOR VILLA MARINA YACHT HARBOUR

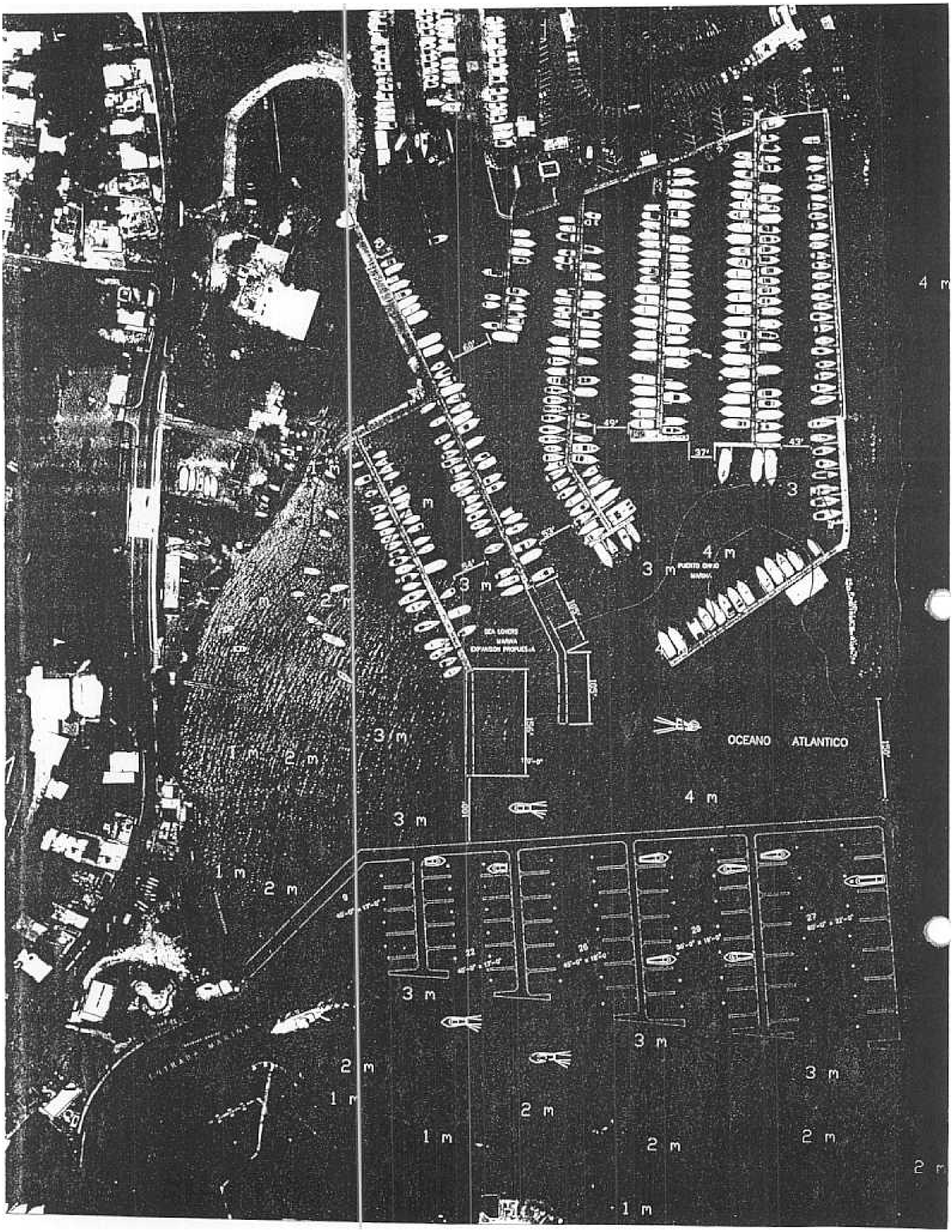
APPLICATION BY:
VILLA MARINA YACHT HARBOUR,INC
AT PLAYA SARDINERA, BAHIA DE FAJARDO
FAJARDO,PUERTO RICO



PARTIAL LONGITUDINAL SECTION



SECTION B–B


OCEANO ATLANTICO
SEA LOVERS MARINA EXPANSION PROPUESTA
PUERTO CHICO MARINA
ENTRADA MARINA
4 m
3 m
2 m
1 m
60'
49'
37'
43'
53'
54'
150'
100'
110'-0"
27
26
22
6

CARIBBEAN OCEANOGRAPHY GROUP
CALLE CACIQUE #2305
SAN JUAN, PR 00913
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Bathymetric Analysis for Villa Marina, Fajardo

By

Alfredo Torruella, Ph.D.
Caribbean Oceanography Group

I. Introduction

A bathymetric analysis of Sardinera Bay and Villa Marina Yacht Harbour has been performed. Information from a variety of sources has been integrated to produce as accurate a map as possible of the ocean floor at the above location. The shape of the coastline was traced from a recent aerial photograph of Sardinera Bay using *AutoCAD 2002* software. The latest available marine chart from the National Oceanic and Atmospheric Administration (NOAA) was digitized using *AutoCAD 2002* and *Maptech Chart Navigator* software. In addition, three *in situ* bathymetric surveys were carried out. Depths and positions were measured and recorded using a *Garmin GPSMap 238 Sounder* connected to a laptop computer running FT Navvision software. The resulting information was combined with the digitized chart data using code written in *True Basic* and *MatLab* software. Figure 1 is an example of the end result. Additional Views of the maps are provided in Section VI.

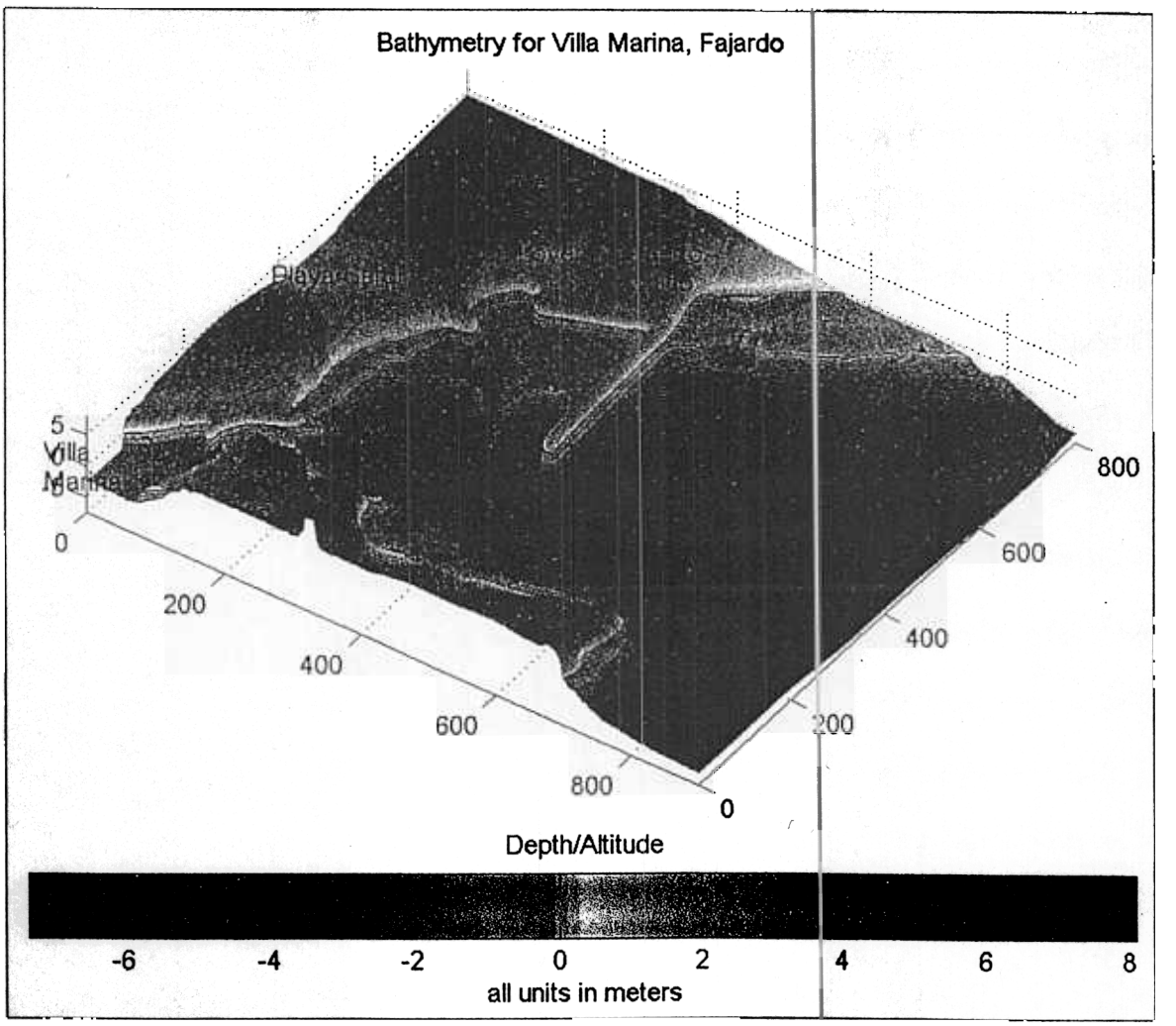


Figure 1. Three-dimensional contour map of the sea floor at Sardinera Bay, Fajardo.

II. Aerial Photography Digitization

On May 8th, 2003, a vertical aerial photograph was taken of Sardinera Bay, Fajardo. This photograph was scanned and loaded into AutoCAD, where it was scaled and rotated with North facing up. The coastline was then traced, and the horizontal and vertical coordinates of the coastline were output to an ASCII file for processing.

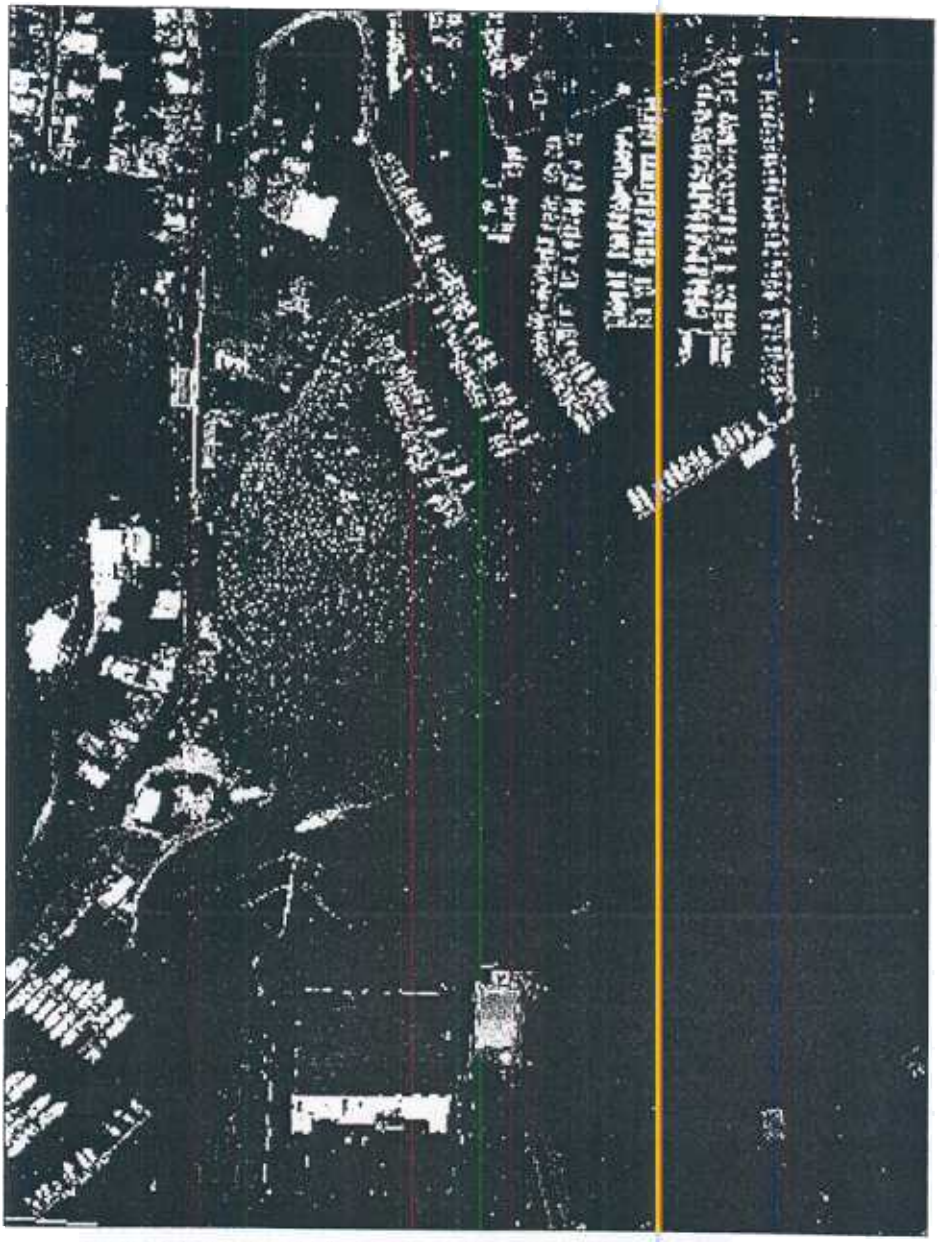


Figure 2. Aerial photograph of Sardinera Bay, Fajardo.

III. NOAA Chart Digitization

As a default data source for the for the creation of the sea floor map, the latest available chart from NOAA was digitized. Figure 2 shows a close up view of Sardinera Bay as shown in NOAA's chart number 25667, *Bahia de Fajardo* and Approaches. The chart's 19th edition was used, which was last updated on July 31st, 1993. There have been no further updates to this chart since then. In fact, This version of the chart is included in *Garmin's BlueChart Data Card* for the Southeast Caribbean, published in April of 2002.

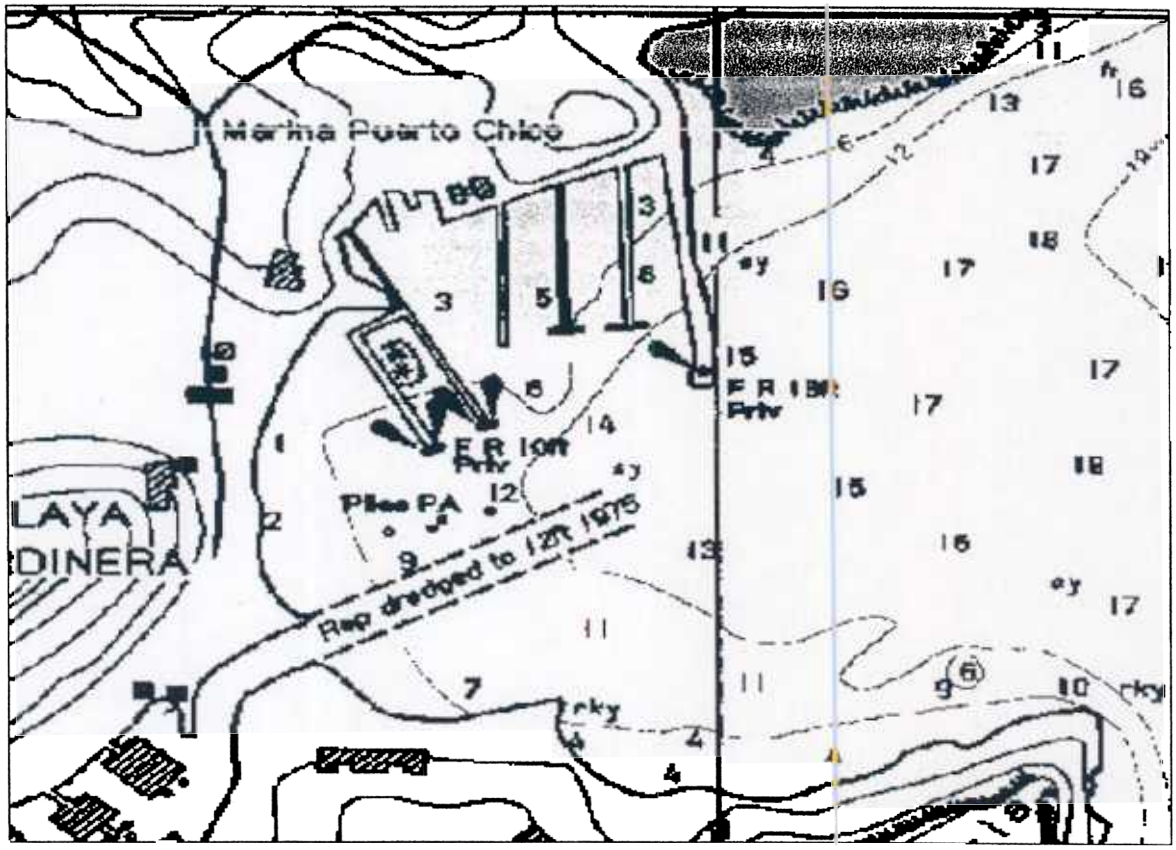


Figure 3. Close up view of Sardinera Bay from NOAA Chart 25667

The digitization process involves the importation of the chart into *AutoCAD 2002* as a raster image. The original image was obtained from *Maptech's Chartpack 8+*, which includes all of the most recent available charts for Puerto Rico, the Virgin Islands, the Leeward and the Windward Islands. Once in AutoCAD, the depth contours and soundings were traced from the chart with three-dimensional poly-lines, each being assigned its own elevation.

After extracting all possible data from the chart, all created poly-lines were selected and the three-dimensional positions of their vertices (x, y and z coordinates) were exported to an ASCII file for processing.

IV. Bathymetric Survey

In addition to the digitized NOAA chart information described above, two *in situ* depth surveys were carried out in Sardinera Bay. The soundings and positions were measured using a *Garmin GPSMap 238 Sounder* on April 26th and May 4th 2003.

The GPS unit has a 12-channel parallel receiver which tracks and uses up to twelve satellites to determine position. It is also WAAS capable, allowing it to receive signals from the additional set of WAAS (Wide Area Augmentation System) satellites for improved accuracy. The 95% typical accuracy is less than 15 meters, with a mean accuracy reported by the instrument during the surveys of approximately 5 meters.

The unit is connected to a transducer that emits 200 and 50 KHz sound waves towards the sea floor in 15 and 45-degree cones, respectively. The travel time of the sound wave from the transducer to the sea floor and back is converted to a depth estimate. These estimates were corrected for tides and the depth of the instrument beneath the surface. The depth estimates are accurate to within approximately ten centimeters.

The transducer was mounted on the transom of a 25-foot center console *Hydrasport 2500*, property of Captain J.J. Melendez Delgado, Dock Master at Villa Marina Yacht Harbor. "Captain JJ" was kind enough to pilot the craft during both bathymetric surveys.

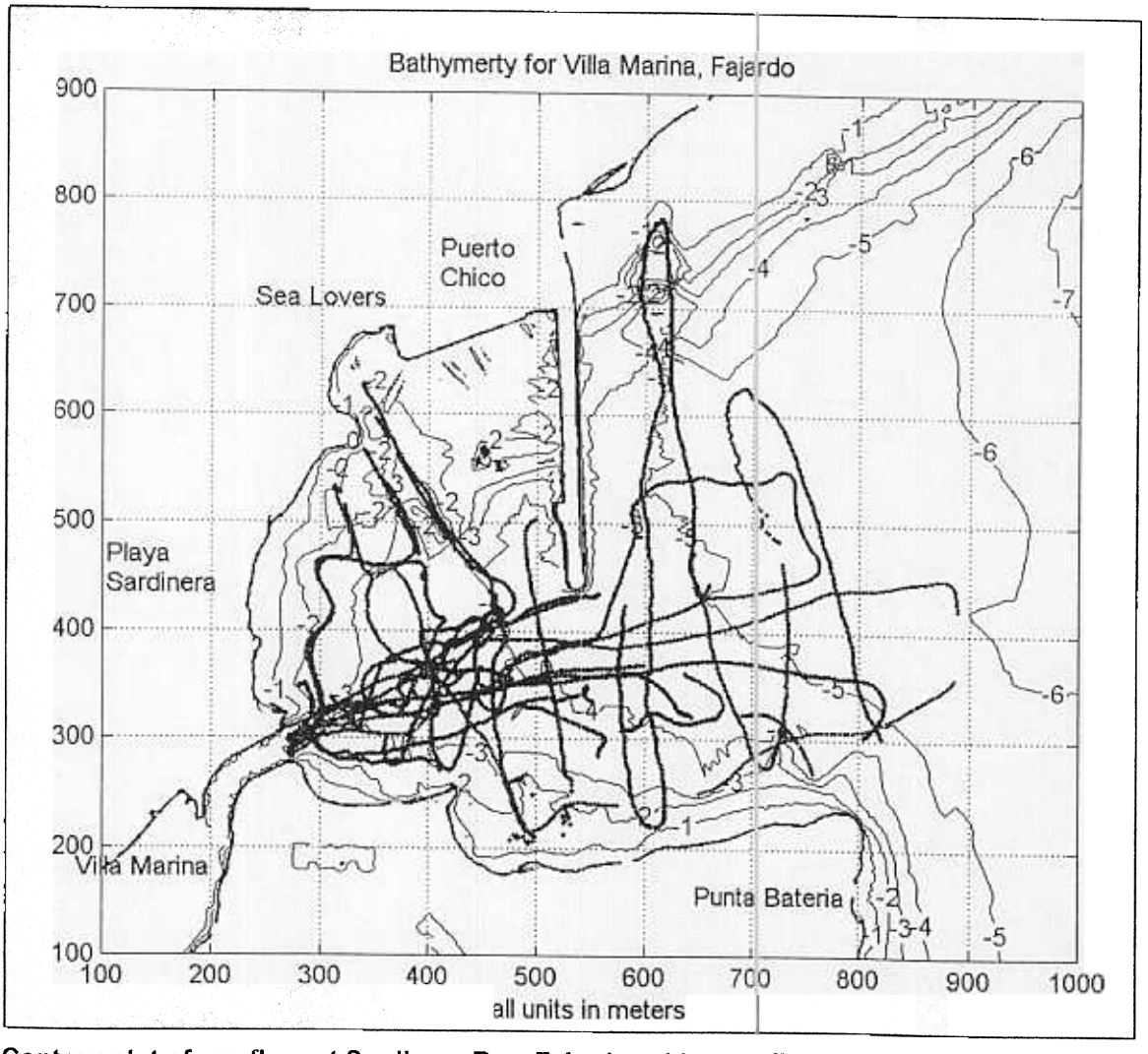


Figure 4. Contour plot of sea floor at Sardinera Bay, Fajardo, with sounding trajectories superimposed.

Figure 3 shows the paths taken while recording the depth and position information. A total of 4,681 measurements were taken on April 26th (shown in blue), a total of 3,412 measurements were taken on May 4th (shown in red), and a total of 3,229 measurements were taken on May 11th (shown in green), for a grand total of 11,322 measurements over all three days.

Finally, the position and depth information was transferred to a laptop computer with the use of a *MiniPlex-41 USB NMEA-0183* multiplexer, and recorder using *FT Navvision* Software. The resulting data (x, y and z coordinates) were written to an ASCII file for processing.

V. Data Processing

Once the digitized photograph and chart data as well as the data from the sounding runs were put into ASCII xyz files, they were processed with *MatLab* code. The data sets were rotated and translated so that their origins and orientations matched. The data was then interpolated onto a regular grid with a two-meter resolution. The interpolation was carried out by first computing a Delaunay triangulation of the data. In this scheme, triangles based on the data are determined such that no data points are contained in any triangle's circumcircle (see Figure 5). The triangles were then used to perform a cubic spline interpolation of the data onto the grid. The cubic interpolation produces a smooth map with continuous first and second derivatives.

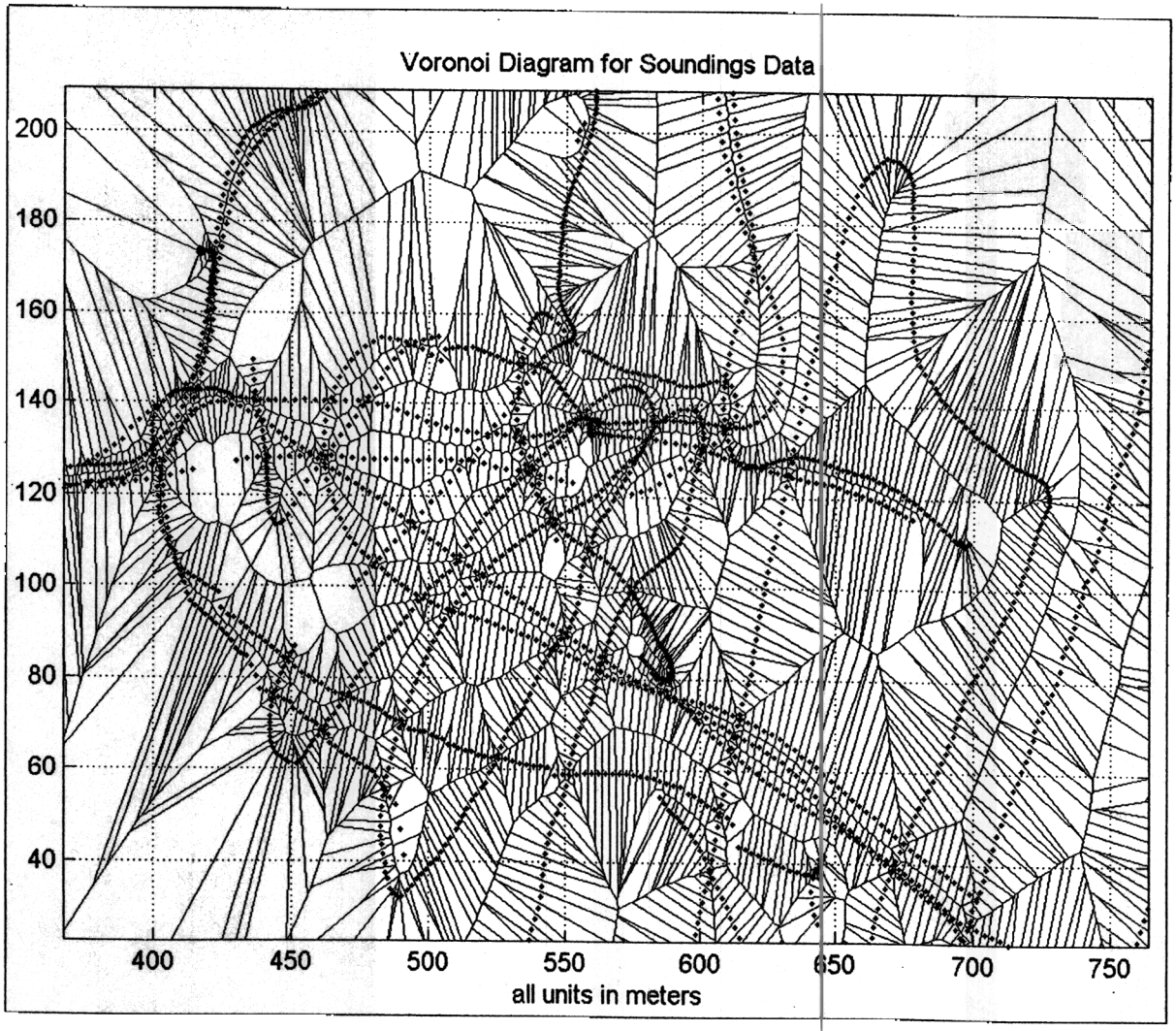
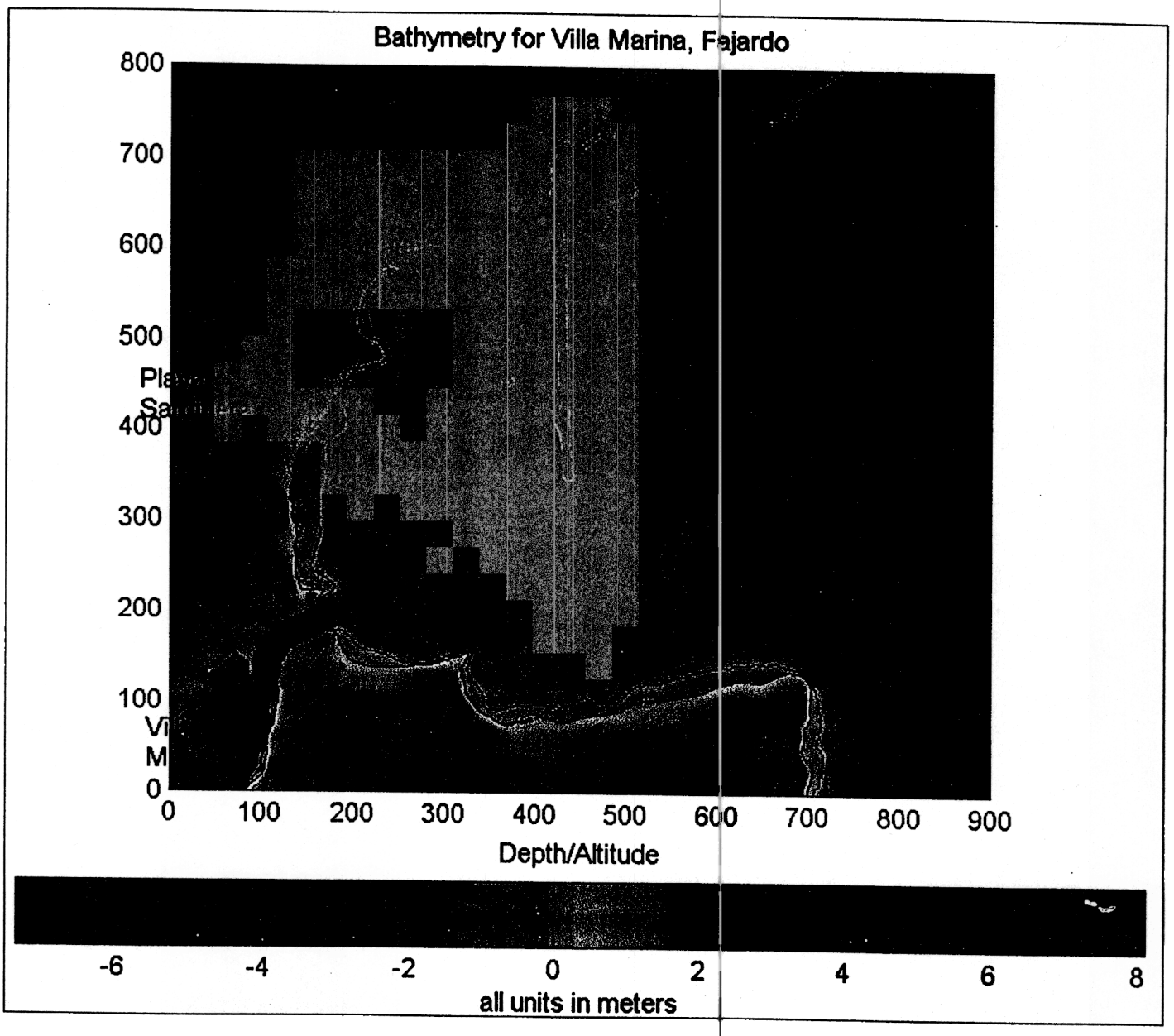
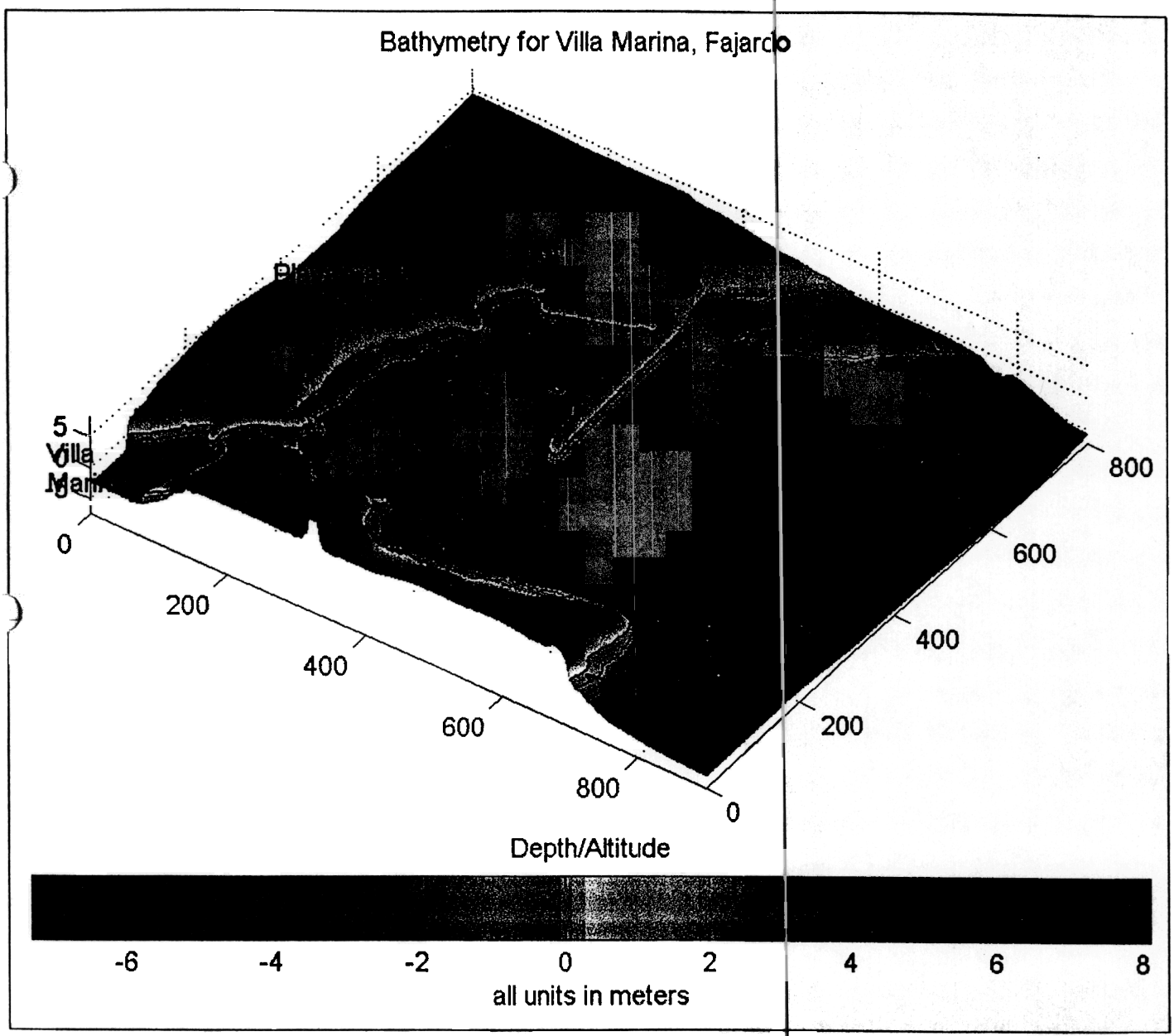


Figure 5. Delaunay triangulation for sounding data.

VI. Maps

This section includes additional renderings of the sea floor at Sardinera Bay, Fajardo....




Bathymetry for Villa Marina, Fajardo
5
0
0
200
400
600
800
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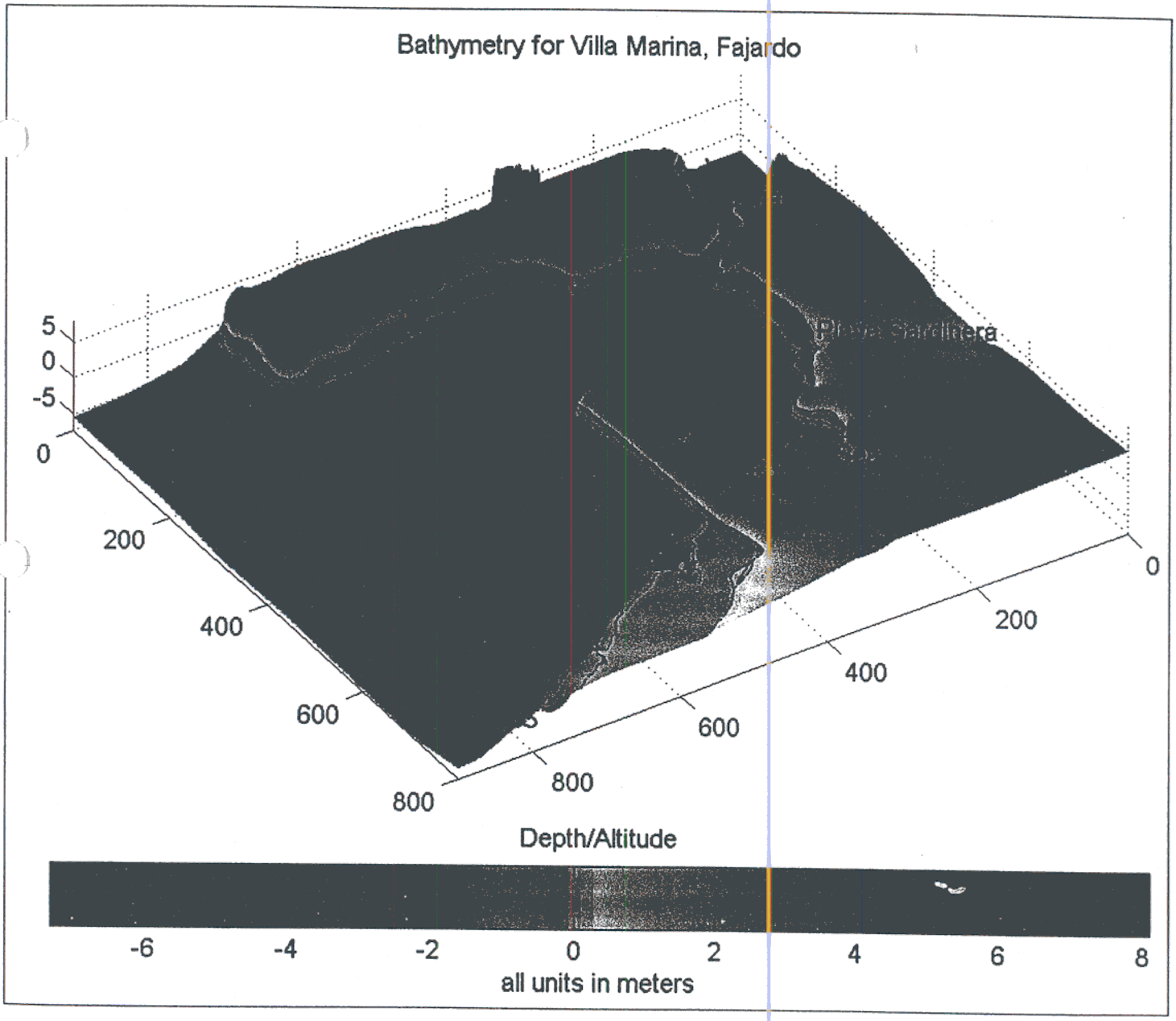
200
400
600
800
Depth/Altitude
-6
-4
-2
0
2
4
6
8
all units in meters


Bathymetry for Villa Marina, Fajardo
5
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-5
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Depth/Altitude
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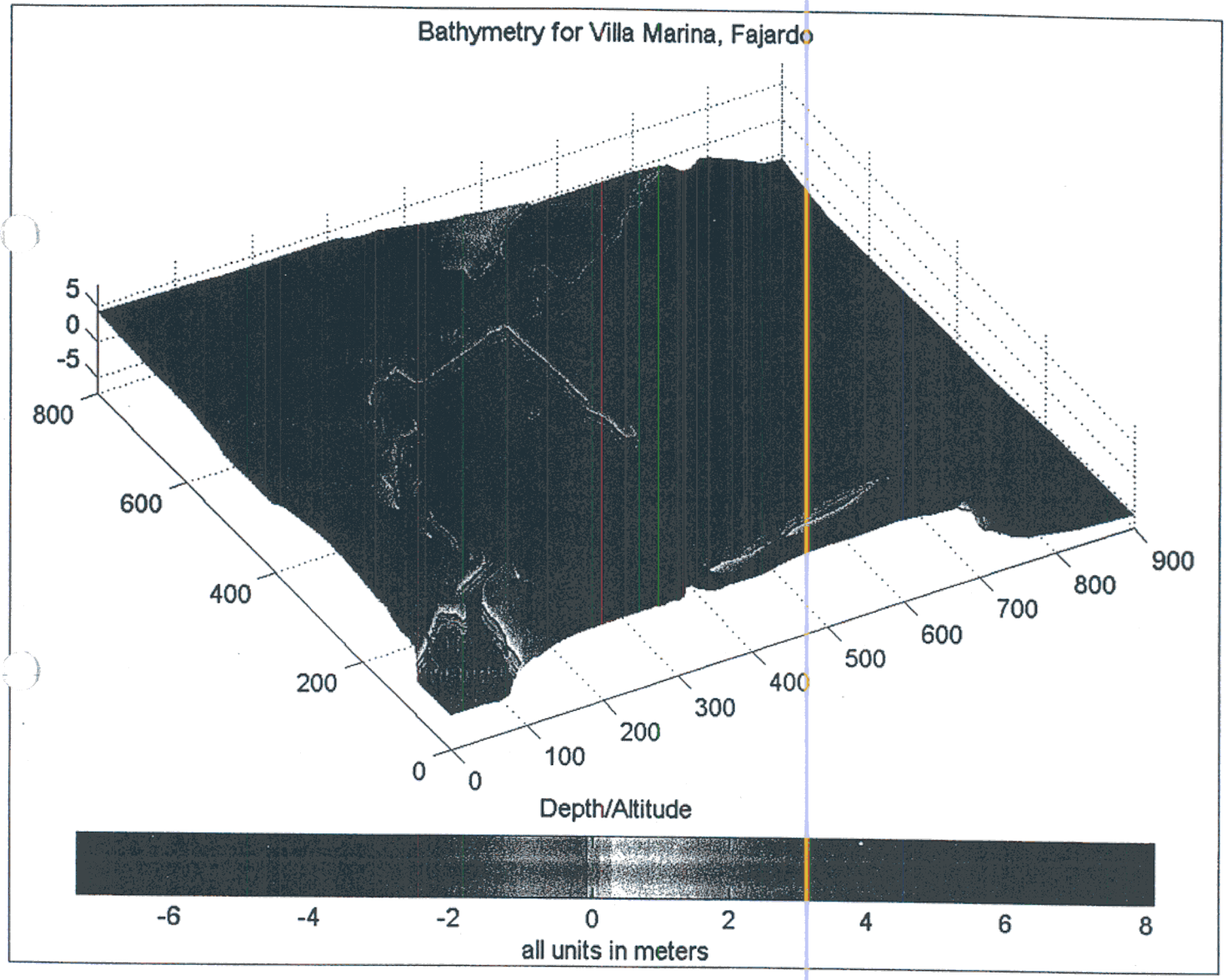
all units in meters


Bathymetry for Villa Marina, Fajardo
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Depth/Altitude
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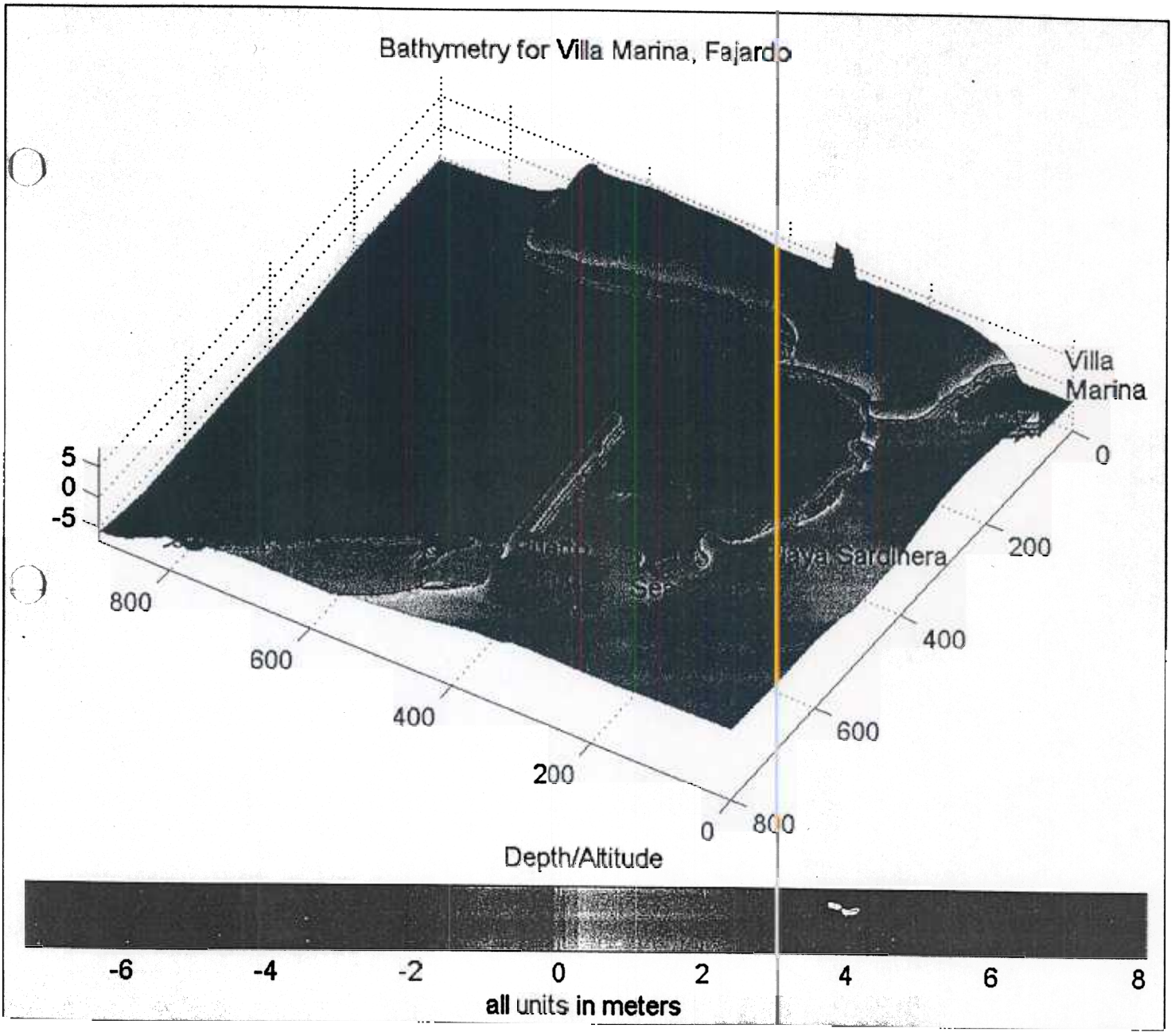
-4
-2
0
2
4
6
8
all units in meters


Bathymetry for Villa Marina, Fajardo
Villa
Marina
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Depth/Altitude
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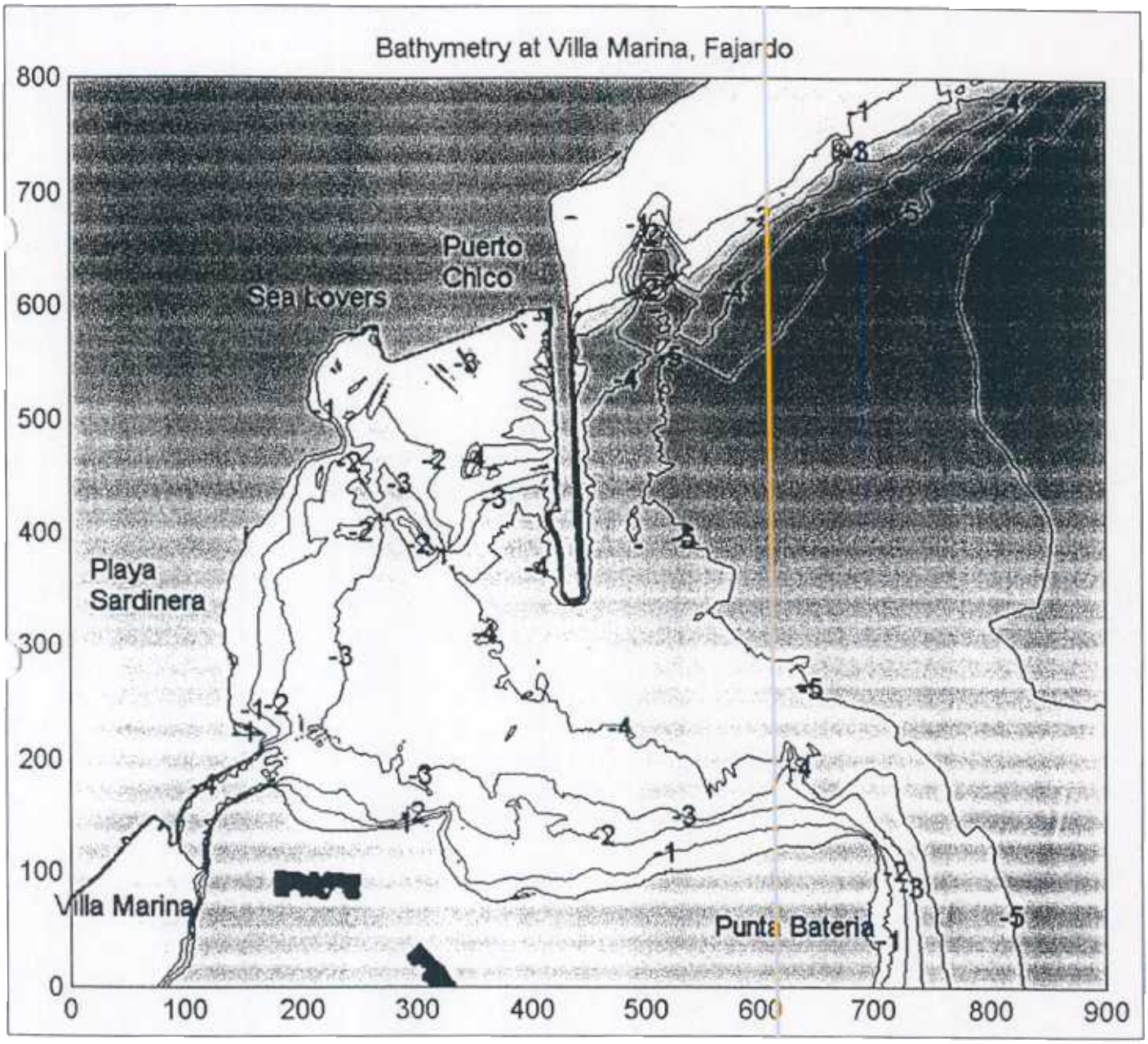
all units in meters


Bathymetry at Villa Marina, Fajardo
Puerto Chico
Sea Lovers
Playa Sardinera
Villa Marina
Punta Bateria
800
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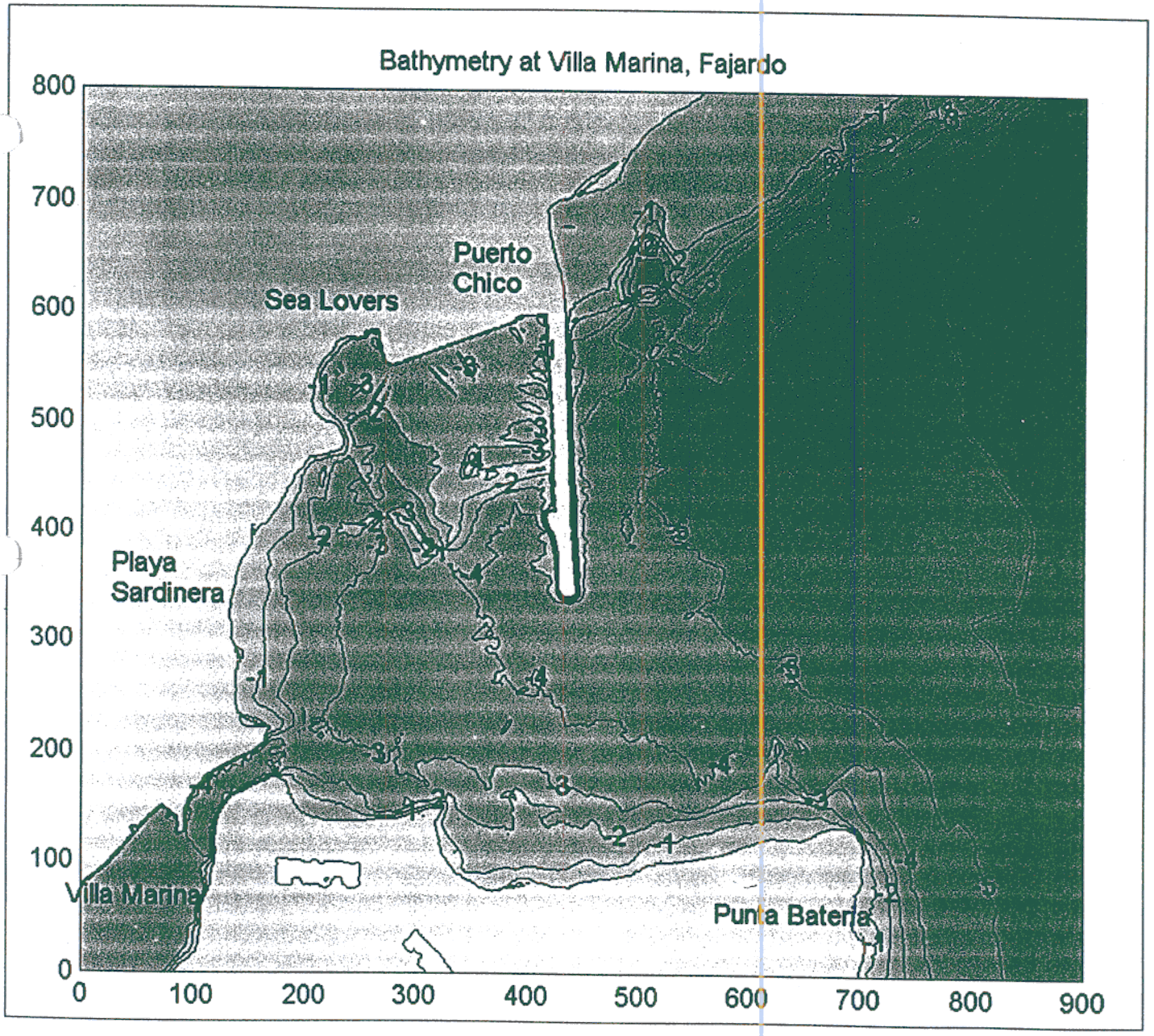
Bathymetry at Villa Marina, Fajardo
Puerto Chico
Sea Lovers
Playa Sardinera
Villa Marina
Punta Batería
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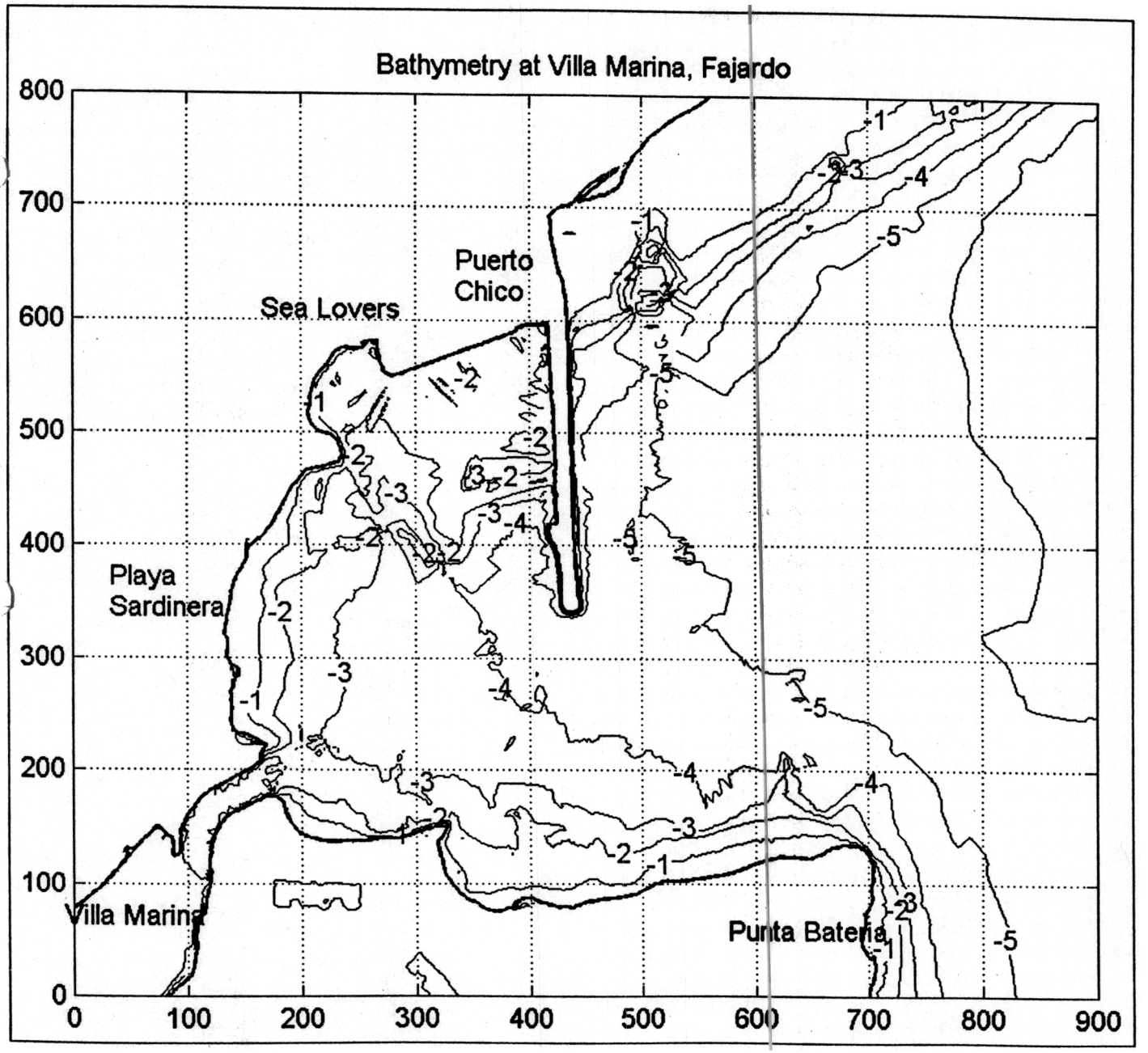
Bathymetry at Villa Marina, Fajardo
Puerto Chico
Sea Lovers
Playa Sardinera
Villa Marina
Punta Bateria
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CARIBBEAN OCEANOGRAPHY GROUP

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atorrue@attglobal.net

Wave Refraction/Diffraction Analysis for Villa Marina Yacht Harbor, Sardinera Bay, Fajardo

Prepared by

Alfredo Torruella, Ph.D.
Caribbean Oceanography Group
6/9/03

CARIBBEAN OCEANOGRAPHY GROUP

I. Introduction

The following is a wave refraction/diffraction analysis that has been carried out for Sardinera Bay in Fajardo, Puerto Rico. The goal is to characterize the wave field that acts on this bay in an attempt to understand how well protected the bay is from the onslaught of waves, as well as how vulnerable the bay is to their incoming energy. In addition, we wish to examine the effectiveness of a breakwater located at the entrance to Sardinera Bay that has been proposed by the owners of Villa Marina Yacht Harbor.

II. Wave Climate

The wave field in the Sardinera Bay has three main sources. Wind waves generated locally by the trade winds, waves generated by extra tropical cyclones in the North Atlantic Ocean, and waves generated by hurricanes. Each one of these sources produces a wave field with a different range of amplitudes and periods, and each occurs on different time scales.

Waves generated by the trade winds are present essentially year round, their amplitudes and directions being correlated to those of the local wind field. In general, they arrive in an easterly direction, have amplitudes between 0.5 and 1.5 meters, and periods of between 3 and 6 seconds.

Waves generated by extra tropical cyclones in the North Atlantic Ocean occur mostly between October and April, and typically occur 10 to 12 times a year. These waves, having been generated at a remote location, are not correlated to the local wind field. Depending on the location and duration of the generating storm, incoming wave directions can range from northwesterly to northeasterly, and each individual coastline will be affected when the incoming swell direction coincides with a path leading to it. Typical ranges of periods and amplitudes are 5 to 13 seconds and 3 to 8 meters, respectively.

Finally, waves generated by hurricanes are the most severe and episodic in nature. The impact of these waves depends directly on the intensity and the trajectory of the storm. Hurricane season runs from June through November every year, and on average one can expect to feel the effects of a hurricane once every ten years or so. Depending on

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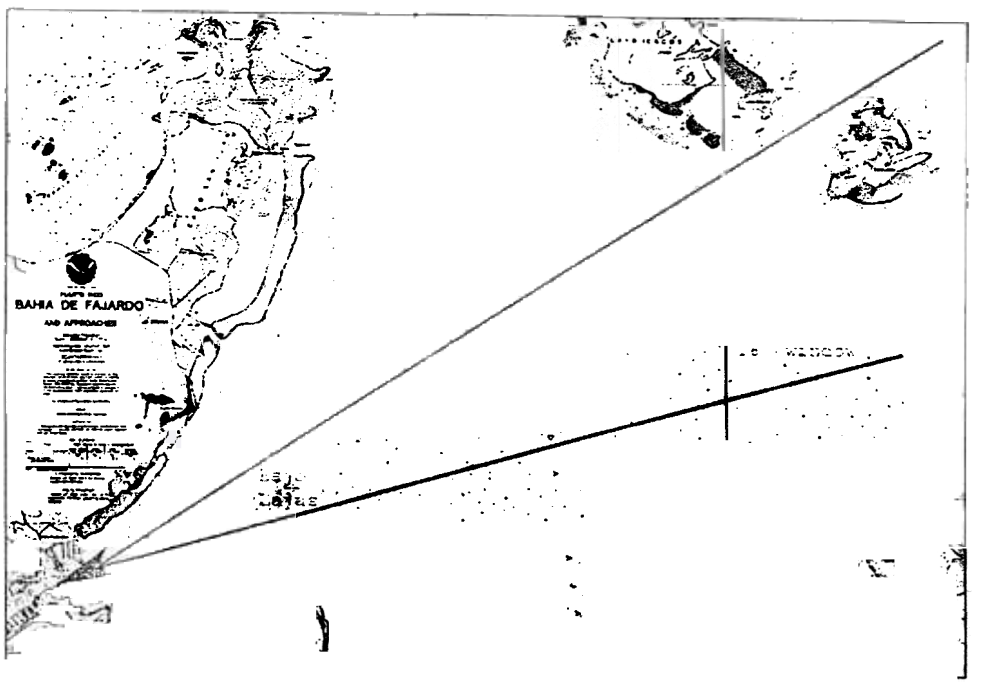
the intensity of the hurricane, generated waves can have heights anywhere from 4 to 17 meters, and periods from 7 to 17 seconds.

Sardinera Bay, Fajardo, is affected by waves from all three of the above-mentioned sources. It is, however, fairly well protected by a series of islands to the East, namely Cayo Icacos, Cayo Lobo, Isla Palominos and Isleta Marina. As a consequence, incoming waves at Sardinera Bay are restricted to two main directions: 30° north of east, corresponding to the gap between Cayo Icacos and Cayo Lobos, and 18° north of east, which corresponds to the gap between Cay Lobos and Isla Palominos. (See Figure 1.)



In order to characterize the wave field at Sardinera Bay as accurately as possible, a numerical wave model has been run using the bathymetry at Sardinera Bay to refract and diffract incoming wave trains whose periods range from 4 to 14 seconds, and have arrival directions of 30° and 18° north of east. In this way we will be able to examine the behavior of waves at Sardinera Bay ranging from every day wind waves to waves generated by a category 4 hurricane on the Saffir-Simpson scale, arriving from all possible directions.